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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/008,938	11/08/2001	John J. Pickerd	7136-US	4805

7590 06/03/2003

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EXAMINER
DESTA, ELIAS

ART UNIT	PAPER NUMBER
2857	

DATE MAILED: 06/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/008,938	PICKERD ET AL.
	Examiner	Art Unit
	Elias Desta	2857

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 November 2001* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-17* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *11/08/2001* is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2 .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

Detailed Action

Drawing

1. The drawing is objected to because of the following minor informalities:

   - Figs. 3, 4A and 4B: horizontal and vertical lines should be labeled and title should be given to each drawing.

Claim Objection

2. Claims 8 and 7 are objected to because of the following minor informality:

   - Page 8, line 14 and page 9, line 29: change "wave form" to "waveform".

Claim rejection – 35 U.S.C. 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) The invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. *Claims 1, 2, 6, 8-11, 15 and 17* are rejected under 35 U.S.C. 102(b) as anticipated by *Pieper et al.* (U.S. Patent 5,371,851).

In reference to claims 1 and 10: *Pieper et al.* teaches a test and measurement instrument (see *Pieper et al.*, Abstract). The instrument includes:

   - A circuitry for entering parameters to be used to detect violations of predetermined parameters (see *Pieper et al.*, Fig. 2, members 134 and 136);

- A data acquisition unit for acquiring a signal on the first channel (see *Pieper et al.*, Fig. 1, members 110, 116, and 108);
- A processing circuitry for processing the signal from the first channel (see *Pieper et al.*, Fig. 1, member 106);
- A display circuitry for displaying a waveform representation of the signal from the first channel (see *Pieper et al.*, Fig. 26);
- A reference memory for storing the first reference waveform (see *Pieper et al.*, column 4, lines 36-40) because the it is inherent that the graphics display have to have a memory in order to retain the waveforms;
- Comparing circuitry for repeatedly comparing the stored first reference waveform to portions of the first signal for detecting the existence of one of the violations by moving the reference waveform along the signal in time (see *Pieper et al.*, column 19, lines 30-54); and
- Circuitry for alerting a user when one of the violations is detected (see *Pieper et al.*, column 22, line 54 to column 23, line 4).

With regard to claims 2 and 11: as noted above in claims 1 and 10, *Pieper et al.* further teaches that the comparison between the signal at the first channel and the stored reference waveform occurs in real time as the signal is acquired because unlike simulators, hardware tests are conducted in real time (see *Pieper et al.*, column 2, lines 56-66).

With regard to claims 6 and 15: as noted above in claims 1 and 10, *Pieper et al.* further teaches that the system includes a signal memory for storing a signal (see *Pieper et al.*, Fig. 10, waveform default icons on the screen represent the stored signals); and the (first) channel signal is a stored signal and the

comparison is a comparison between stored signal and the waveform occurring signal is read out from the signal memory (see *Pieper et al.*, column 67, lines 18-29). Further, as for having a long record length stored signal, *Pieper et al.* in Fig. 42 includes information on a sample regarding timing, state, frame and time-set information for the a test signal, hence the system allows a long variable length of record signal per test sample.

With regard to claims 8, 9 and 17: as noted above in claim 1, *Pieper et al.* further teaches that the reference waveform is defined by positioning a gate on a reference signal, and the gate is positioned by user adjustment of a gate positioning control (which is a slider control display) displayed on the display screen (see *Pieper et al.*, Fig. 11, member 166, a slider control display).

Claim rejection – 35 U.S.C. 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. *Claims 3, 4, 7, 12, 13 and 16* are rejected under 35 U.S.C. 103(a) as being unpatentable over *Pieper et al.* (U.S. Patent 5,371,851) in view of *Owaki et al.* (U.S. Patent 6,009,523).

In reference to claims 3 and 12: as noted above in claims 2 and 11, *Pieper et al.* teaches that the comparison between the signal at the first channel and the stored reference waveform occurs in real time; however, *Pieper et al.* does not teach that the reference memory stores a second reference waveform and the comparison circuitry repeatedly compares the first and second reference waveforms to the portion of the first signals for detecting the violation.

Owaki et al. teaches a security checking means for comparing the comparison reference data (waveform) (see *Owaki et al.*, column 3, lines 9-63).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the signal comparison method as taught in *Pieper et al.* and include a multiple step comparison method as discussed in *Owaki et al.* in order to better predict the violation of the expected output, because the repeated reference steps would allow the user to obtain the violation flag with better certainty (see *Owaki et al.*, column 3, lines 58-63).

With regard to claims 4 and 13: as noted above in claims 3 and 12, *Pieper et al.* further teaches that the circuitry of selecting portions of the reference signal under user control, and storing the first selected portion in the reference memory of the first reference waveform (see *Pieper et al.*, column 4, lines 36-40) because the it is inherent that the graphics display have to have a memory in order to retain the waveforms;

With regard to claims 7 and 16: as noted above in claims 4 and 13, *Pieper et al.* further teaches that the reference memory stores a reference waveform; and the comparing circuit repeatedly compares the reference waveforms to the portions of signal for detecting one of the violations (see *Pieper et al.*, column 22, line 54 to column 23, line 4). Further, as for the first and second sample, see the discussion in claims 3 and 12 and claims 6 and 15 for the long record length stored signal.

7. *Claims 5 and 14* are rejected under 35 U.S.C. 103(a) as being unpatentable over *Pieper et al.* (U.S. Patent 5,371,851) in view of *Cook et al.* (U.S. Patent 3,810,027).

In reference to claims 5 and 14: as noted above in claims 1 and 10, *Pieper et al.* further teaches that a user defines the gate and vector assignment relationship in order to carry out the required test (see

Pieper et al., column 1, lines 54-68). However, *Pieper et al.* does not teach in terms of number of active gates, gate position, gate width, and tolerance to define the predetermined parameters.

Cook et al. teaches signal processing method and apparatus for gated circuits (see *Cook et al.*, Abstract). Further in column 2, lines 56-67 *Cook et al.* teaches that the system characterization is done in terms of gates, gates position, gate width, and tolerance to define the predetermined parameters.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the process of gate characterization as taught by *Pieper et al.* in order to define the active gates in terms of their gate position, gate width and tolerance because by limiting the gate parameters such as the width, a user would be able to limit the pulse width of interest to accommodate the requirements imposed by finite data rates (see *Cook et al.*, column 2, lines 59-65).

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant disclosure.

- *Ottsen* (U.S. Patent 4,005,477) teaches phase equalized read-back apparatus and methods for adjusting read-back signal to enhance detection capability.
- *Singer et al.* (IEEE article) teaches very low frequency simulation and atmospheric noise characterization to support laboratory tests.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elias Desta whose telephone number is (703)-305-3840. The examiner can normally be reached on M-Thu (8:00-6:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marc S. Hoff can be reached on (703)-308-1677. The fax phone numbers for the organization where this

application or proceeding is assigned are (703)-308-5841 for regular communications and (703)-308-5841 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)-308-1782.

Elias Desta
Examiner
Art Unit 2857

-ed

May 20, 2003